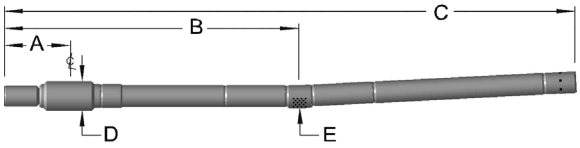
NATIONAL OILWELL VARCO



A 2.9 ft (0.88 m)
B 7.5 ft (2.29 m)
C 30.3 ft (9.24 m)
D Maximum Diameter of Motor at Upset: 10.75 in (273 mm)
E Radius of Offset Pad: 5 in (127 mm)

Common Top Connection: 6 5/8 REG, 7 5/8 REG, 7 H-90
Common Bottom Connection: 6 5/8 REG, 7 5/8 REG

Weight: 5240 lbs (2370 kg)

Predicted Build Rates - Degrees/100ft (30m)

Bend Setting	Slick			Single Stabilizer			Two Stabilizers		
	Hole Size			Hole Size			Hole Size		
Deg	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2
0.39	1.0	1.0	1.0	2.3	3.1	3.9	1.6	1.6	1.6
0.78	2.1	2.0	1.9	4.1	4.8	5.5	3.6	3.6	3.6
1.15	3.1	3.0	2.8	5.8	6.5	7.1	5.6	5.6	5.6
1.50	4.8	3.9	3.7	7.4	8.0	8.6	7.4	7.4	7.4
1.83	6.6	4.7	4.5	8.9	9.5	10.0	8.9	9.1	9.1
2.12	8.1	5.5	5.2	10.3	10.8	11.3	10.3	10.7	10.6
2.38	9.5	6.1	5.9	11.5	11.9	12.4	11.5	11.9	12.0
2.60	10.7	6.9	6.4	12.5	12.9	13.3	12.5	12.9	13.1
2.77	11.6	7.7	6.9	13.2	13.7	14.1	13.2	13.7	14.0
2.89	12.2	8.3	7.1	13.8	14.2	14.6	13.8	14.2	14.6
2.97	12.7	8.8	7.3	14.2	14.6	14.9	14.2	14.6	14.9
3.00	12.8	8.9	7.4	14.3	14.7	15.0	14.3	14.7	15.0

Maximum Adjustable Bend Setting For Rotary Drilling - Degrees

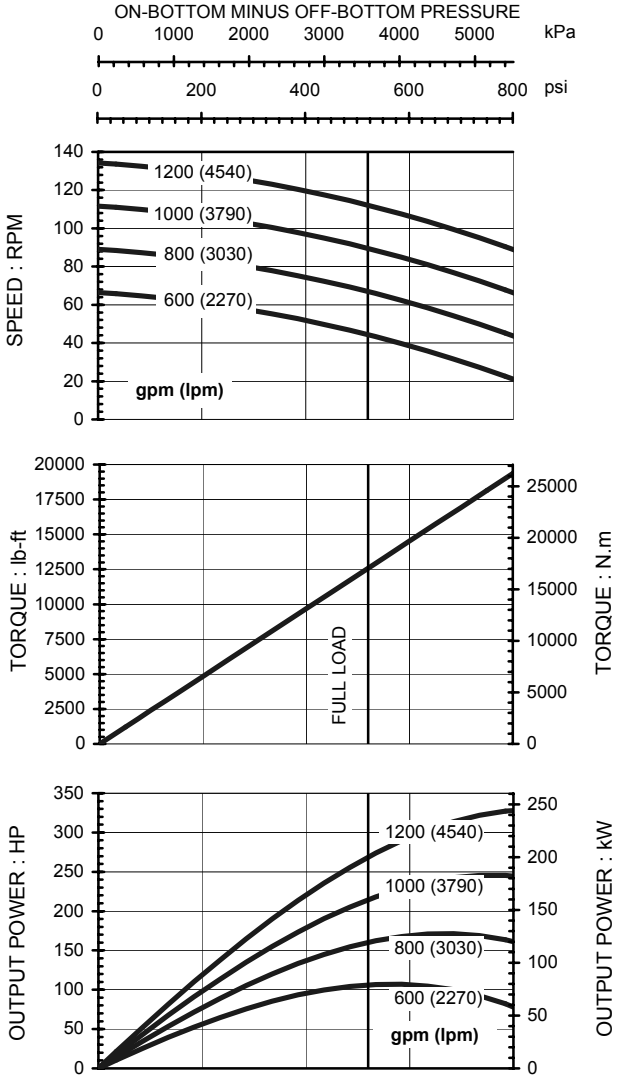
Hole Curvature	Slick			Single Stabilizer			Two Stabilizer		
	Hole Size			Hole Size			Hole Size		
Deg/100ft	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2
0.0	3.00	3.00	3.00	2.38	2.60	2.77	2.12	1.83	1.83
3.0	2.60	3.00	3.00	1.83	1.83	2.12	1.50	1.50	1.15
6.0	2.12	3.00	3.00	1.15	1.15	1.50	0.78	0.78	0.78
9.0	1.50	2.77	3.00	0.39	0.78	0.78	0.39	0.00	0.00
12.0	1.15	2.38	3.00	0.00	0.00	0.39			
15.0	0.39	1.83	3.00						
18.0	0.00	1.15	2.60						
21.0		0.78	2.12						
24.0		0.39	1.50						
27.0		0.00	1.15						
30.0			0.78						
33.0			0.00						
36.0									

Refer to page 11-1 for guidelines of above table.

9 5/8" 5/6 M/L 4.0 Stage

Specifications based on series 17 motor.

Maximum Pump Rate	1,200	gpm	4540	lpm
Revolutions per Unit Volume	0.12	rev/gal	0.032	rev/l
Pressure at Full Load	520	psi	3580	kPa
Torque at Full Load	12,580	lb-ft	17046	Nm
Maximum Weight on Bit	251,000	lbs	1130	kN
Maximum Pull to Re-Run Motor	581,000	lbs	2610	kN
Pull to Yield Motor	1,280,000	lbs	5760	kN



1. Total pressure loss through motor with no load is approximately 230 psi (1580 kPa) @ 1000 gpm (3790 lpm).
2. Charts show suppliers' data with water @ 68°F (20°C).
3. For temperatures exceeding 140°F (60°C), full load pressure decreases as per Table 5.1, page 5-8.